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INTENSIFIED PROTECTION OF WYOMING VALLEY FORESTS AGAINST FIRE THROUGH USE OF COMMUNITY LABOR

ALLEGHENY FOREST EXPERIMENT STATION

ECONOMIC SURVEY
ANTHRACITE FOREST REGION

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

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Forests - A Great Potential Resource

The anthracite coal region of Pennsylvania was once completely forested. There were magnificent stands of pine, hemlock, oak, maple, and other timber trees, supporting a great lumber industry. Even today over 60% of the land area of the 5 principal coal-producing counties is forest land. At least 50% of the 12-county area, which may be called the anthracite region, is still forested. See Map No. 1.

Abused by axe, saw, and fire, the forests of today are mostly poorly-stocked and have a high percentage of inferior timber trees. Yet these forests are capable of yielding a perpetual supply of mine timbers, as well as a large surplus of wood for general purposes. They might serve more effectively than they do today to retard run-off of rain and melted snow into mines and streams and to prevent soil erosion. As year-long recreation grounds they can be made increasingly attractive not only to local people, but to the huge populations of or near New York and Philadelphia.

Fires Prevent Forest Restoration

The greatest single obstacle to the restoration and full development of the forests of the anthracite region is fire. Large areas have been repeatedly burned and today bear only scrub oak, aspen, and gray birch. Of the remainder, scarcely an acre is without fire scars on the older trees, or openings in the younger stands caused by past conflagrations. Some landowners attempting to restore wrecked forest to

productivity by planting trees have abandoned the effort after fires destroyed their plantations.

Everybody Loses When Forests Burn

Landowners are by no means the only losers when forests burn. Theirs is the loss in trees which the fire cripples or kills. Some owners - where "surface" over coal measures is concerned - risk ignition of coal outcrops and entrance of smoke into the mines. But the entire community loses taxes when productive land is rendered less productive, and jobs when raw material is destroyed. And the general public loses further those so-called intangible values of recreational use and streamflow regulation, which rarely accrue to the landowner, but which are greatly impaired when fire decimates wildlife, lessens natural beauty, and thins the vegetative cover of watersheds.

Protection Against Fire is Difficult

High winds in spring and fall, and local droughts in summer, dry the brushy lands of the anthracite region with amazing speed. Openings in the second-growth stands of more valuable species become parched almost as quickly. Many coal properties dry even more rapidly because of drainage into mines or cave-ins. Most of these woods lie at the very door of populous communities. The number of man-caused fires, most of which are started by careless or thoughtless individuals, is excessive. Steep, rocky slopes, the lack of roads or trails in some places, and in others dangerous mine-caves, make it hard to reach fires quickly or to fight them effectively when reached. Under these conditions it is not surprising that hardly any comparable forest area of the northeastern United States has been more extensively burned.

In the average year about 22,500 acres are fireswept. This is well over 1% of the forested area. Map No. 2 shows how this burn is distributed by counties. The very small average burn in some counties demonstrates that successful protection is by no means out of the question in the region. In other counties the use of an average figure conceals very high losses in exceptional years. Even in a recent year as much as 6.0% of one county's forest area has burned.

The State Active in Fire Control

The Pennsylvania Department of Forests and Waters is fully alive to the seriousness of the fire problem in the forests of the anthracite region. It has long maintained the organization of foresters, forest inspectors, and fire lookouts shown in Map No. 3, and enforces the fire laws. In most parts of Pennsylvania this organization would be able to keep fire losses down to a satisfactory level - an average burn of a fraction of 1%. But conditions in the hard coal region, among them the presence of great areas rendered more inflammable by past fires, favor a much higher percentage of burned land than elsewhere. Only by spending here, in about 15% of Pennsylvania's forest land, nearly 50% of his funds for fire fighting, has the Chief Forest Fire Warden been able to prevent a greater loss. The State can and is intensifying its effort, but as it must spread its resources over the entire State, increased local help is essential.

The Federal Government Cooperates

Under the Clarke-McNary Act of 1924 the Federal Government contributes substantial financial aid to the State in protecting forests against fire. It also cooperates through research.

Additional Facilities Needed

Public effort is handicapped by lack of roads or trails into some areas of high hazard, and by the dearth of fire breaks or fire lanes dividing large inflammable areas into small units to which fires may be confined by back-firing. Because roads and trails built pri marily for the fire-fighting crews to some extent encourage public travel and thereby increase the danger from man-caused fires, it is helpful to reduce the fire hazard along them by felling dead trees, mowing inflammable brush, and similar "fire-proofing". Among other physical improvements which are needed at various points in the an thracite region are vehicle bridges, cabins for fire lookouts at observation towers, and development or improvement of water supplies for fire fighting.

Anthracite Region

A tentative list of physical improvements, desirable to give the hard coal region more satisfactory protection against fire, was recently drawn up by three District Foresters of the State in this region. Some 2,500,000 man-days of labor could be absorbed in their construction. Distribution by counties is shown in Map No. 4. The estimates do not include the labor which might be effectively used in construction of fire lanes to safeguard individual properties, or to provide safe routes for travel of fire crews in some localities made dangerous by mine-caves.

Wyoming Valley and Vicinity

The Wyoming Valley is typical of the anthracite region. The Valley proper lies on both sides of the Susquehanna River from Pittston

to Nanticoke, but for present purposes is considered to extend to Shickshinny. With this extension it includes about 125,000 acres of forest land in large ownerships alone. In ruggedness, in character of forest from worst to best, in density of population, and in amount of unemployment, it illustrates conditions in the hard-coal field. Several townships in the Valley have more than the average number of fires yearly, others less. The Department of Forests and Waters shares with the Allegheny Station the belief that the Valley offers an excellent opportunity to demonstrate the value of adequate physical improvements in intensive protection. Thirty-two such are located and numbered on Map No. 5. These are in addition to existing improvements - chiefly fire towers - shown on the same map. The number of man days estimated to construct each appears in the table on page 7.

Local Action Indispensable

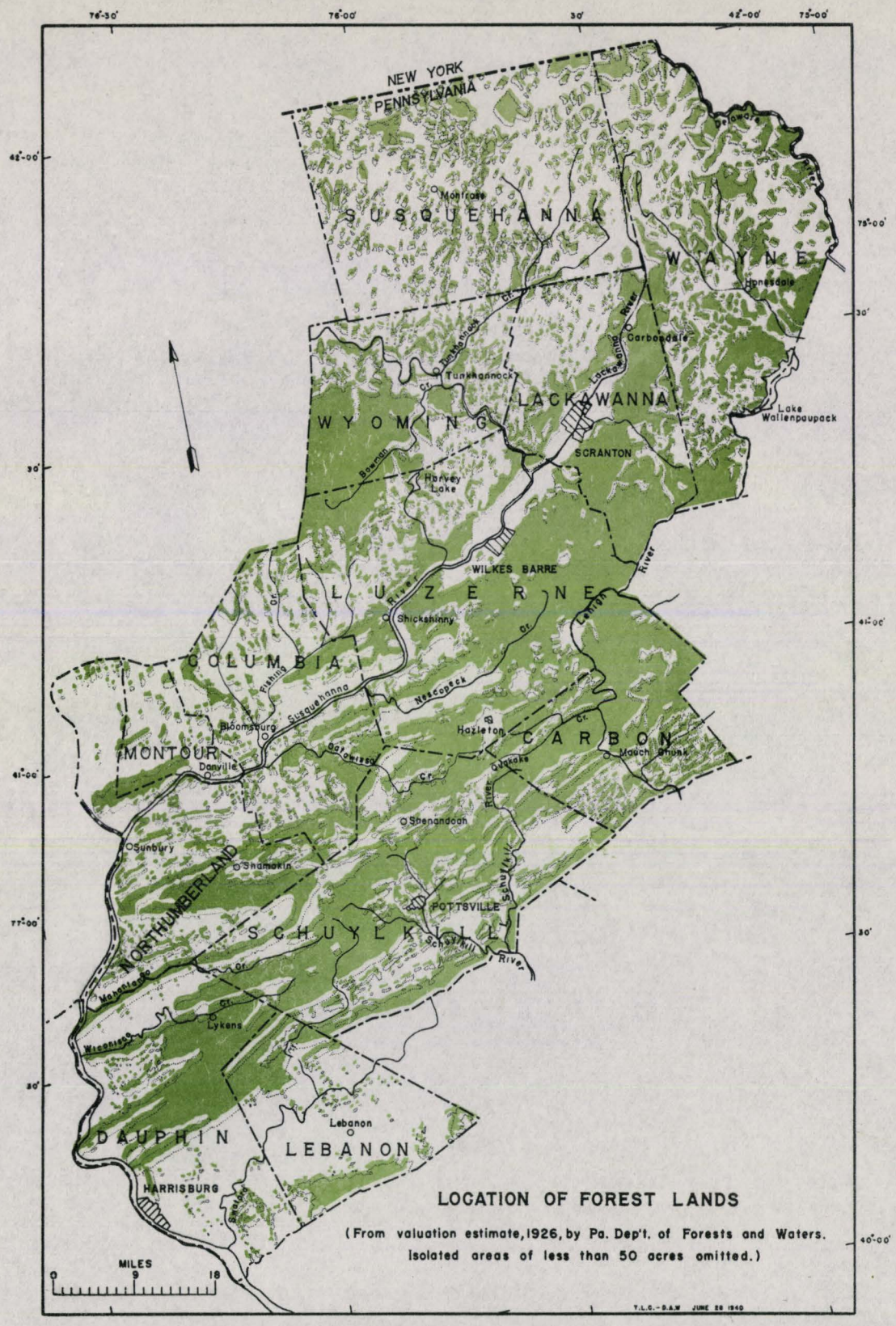
The unusual fire hazards which nature and man have created in much of the anthracite region, and the heavy damages to which forest fires expose certain classes of property here, place a special responsibility on landowners and local governments alike to intensify the protection now given to the region's forests. By assuming this responsibility, they qualify under specific agreement for help from the State and Federal governments, within the limit of current appropriations. Under such agreements Pennsylvania is authorized to cooperate with persons or corporations for forest fire prevention and control, and to contribute a reasonable share of the funds spent. The Federal Government has authorized such emergency organizations as the WPA to contribute heavily to the cost of district-wide systems of physical

improvements needed on private forest land.

Intensified local effort is necessary to qualify legally for greater State and Federal aid. But it is also essential to any permanent solution of the forest fire problem. The most elaborate system of protection breaks down in the face of indifference of the landowner and carelessness of the people who live in or near the woods. Organized local effort, in which both landowner and local governments participate, builds up popular respect and consideration for the forest. Although temporarily expensive, intensive protection against fire in time permits tall trees to crowd out scrubby ones, and dense forests to replace open stands. Protection becomes more effective and costs decrease.

	Bridges			
104-1	Little Shickshinny Vehicle Bridge #1	1	1	300
104-2	Little Shickshinny Vehicle Bridge #2	1	1	300
104-3	Penobscot Vehicle Bridge	1	1	300
104-4	Avoca Vehicle Bridge #1	1	1	300
104-5	Avoca Vehicle Bridge #2	1	1	300
104-6	Mill Creek-Dupont Vehicle Bridge #1	1	1	300
104-7	Mill Creek-Dupont Vehicle Bridge #2	1	1	300
115-1	Penobscot Lookout House	1	1	500
160	Waterhole Construction	1	50	1,250
	Truck Trails			
202-1	Wolves Den Truck Trail	mile	1.75	4,375
202-2	Dickville Township Truck Trail	"	1.50	3,750
202-3	Mill Creek - Dupont Truck Trail	"	3.00	7,500
202-4	Kresge - Big Shiney Truck Trail	"	5.00	12,500
202-5	Avoca - Mt. Pisgah Truck Trail	"	5.00	12,500
202-6	Penobscot - Wyoming Mt. Truck Trail	"	5.50	13,750
202-7	Wilkes-Barre Mt. Truck Trail	"	4.50	11,250
202-8	Rocky Run - Little Shickshinny Valley Truck Trail	"	5.50	13,750
202-9	Huntingdon Mountain Truck Trail	"	2.75	6,875
202-10	Shickshinny Mountain Truck Trail	"	2.75	6,875
	Foot Trails			
206-1	Shickshinny Mountain Foot Trail	"	2.50	375
206-2	Retreat Mountain Foot Trail	"	8.50	1,275
206-3	Plymouth Mountain Foot Trail	"	4.25	637
206-4	Penobscot - Haystack Mt. Foot Trail	"	13.50	2,025
206-5	Hunlock Mountain Foot Trail	"	5.00	750
206-6	West Pittston Tower Foot Trail	"	2.00	300
206-7	Dupont Foot Trail	"	1.50	225
206-8	Mount Pisgah Foot Trail	"	1.75	263
206-9	Kresge Foot Trail	"	2.00	300
206-10	Wyoming Mountain Foot Trail	"	1.75	263
206-11	Penobscot Mountain Foot Trail	"	1.25	187
	Fire Hazard Reduction			
603	Fire Hazard Reduction (Roadside)	"	37.25	2,607
603	Fire Hazard Reduction (Trailside)	"	44.00	2,200
	Total Man-Days			108,382

*For location see Map No. 5. Standard numbering as used by CCC.



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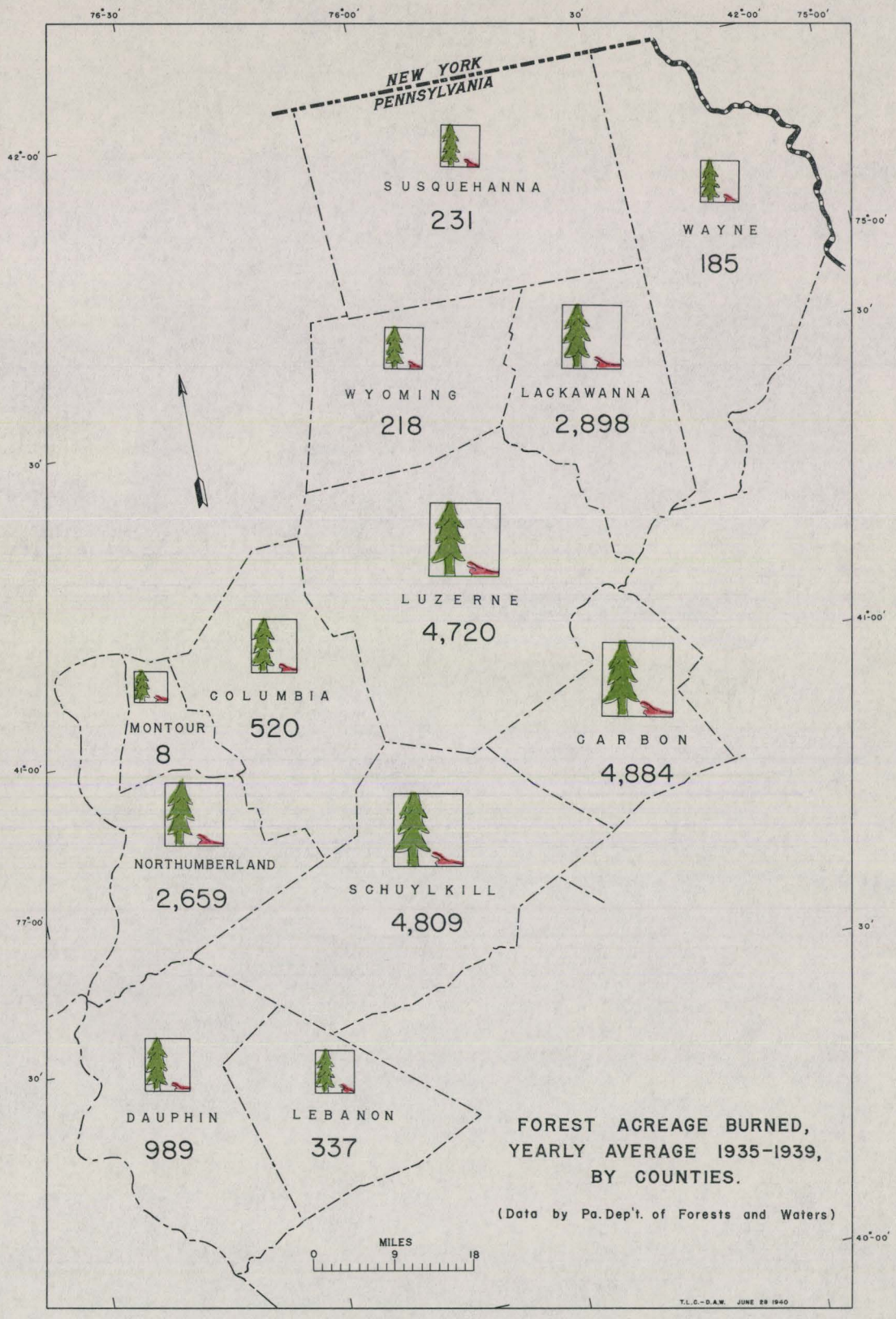

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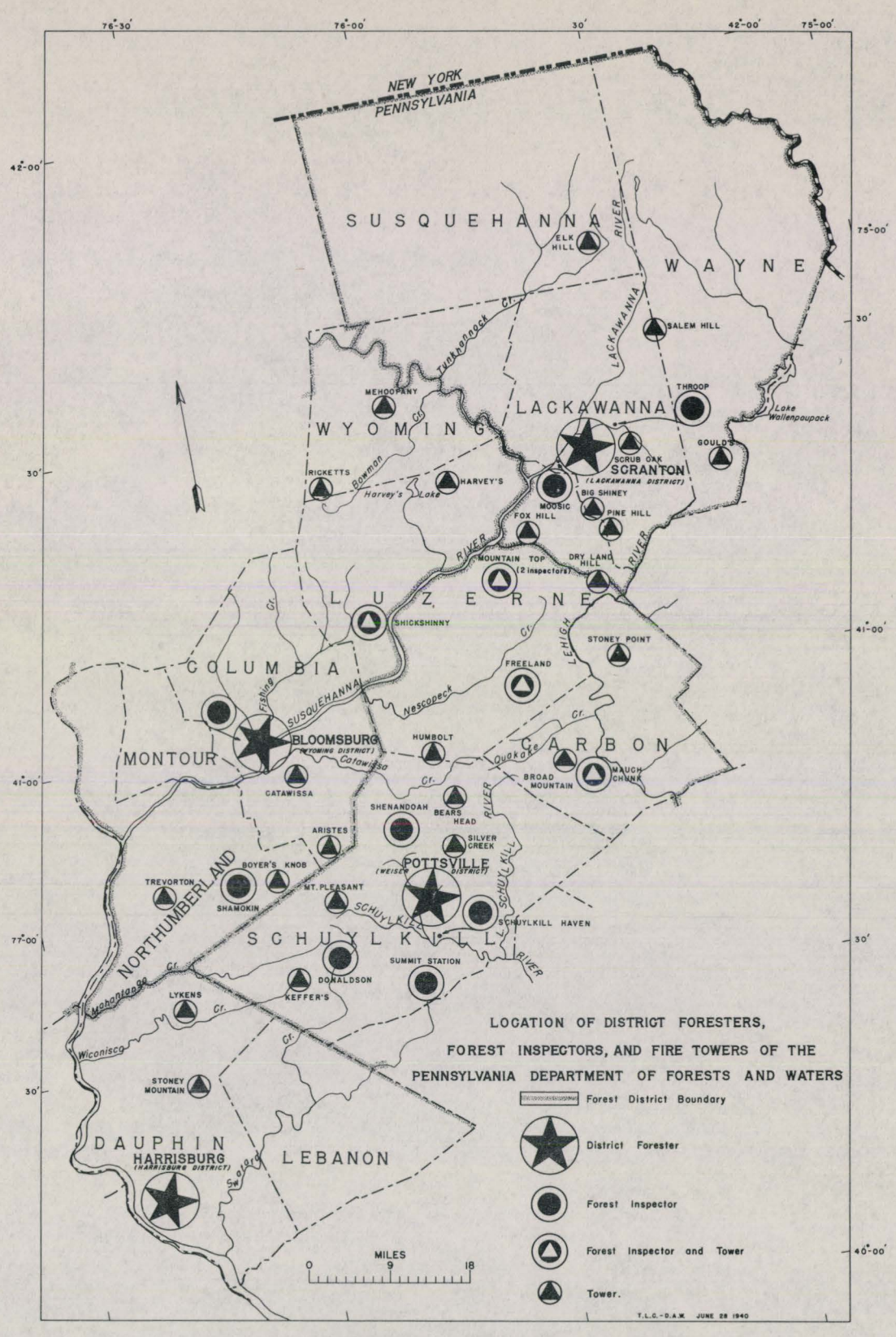

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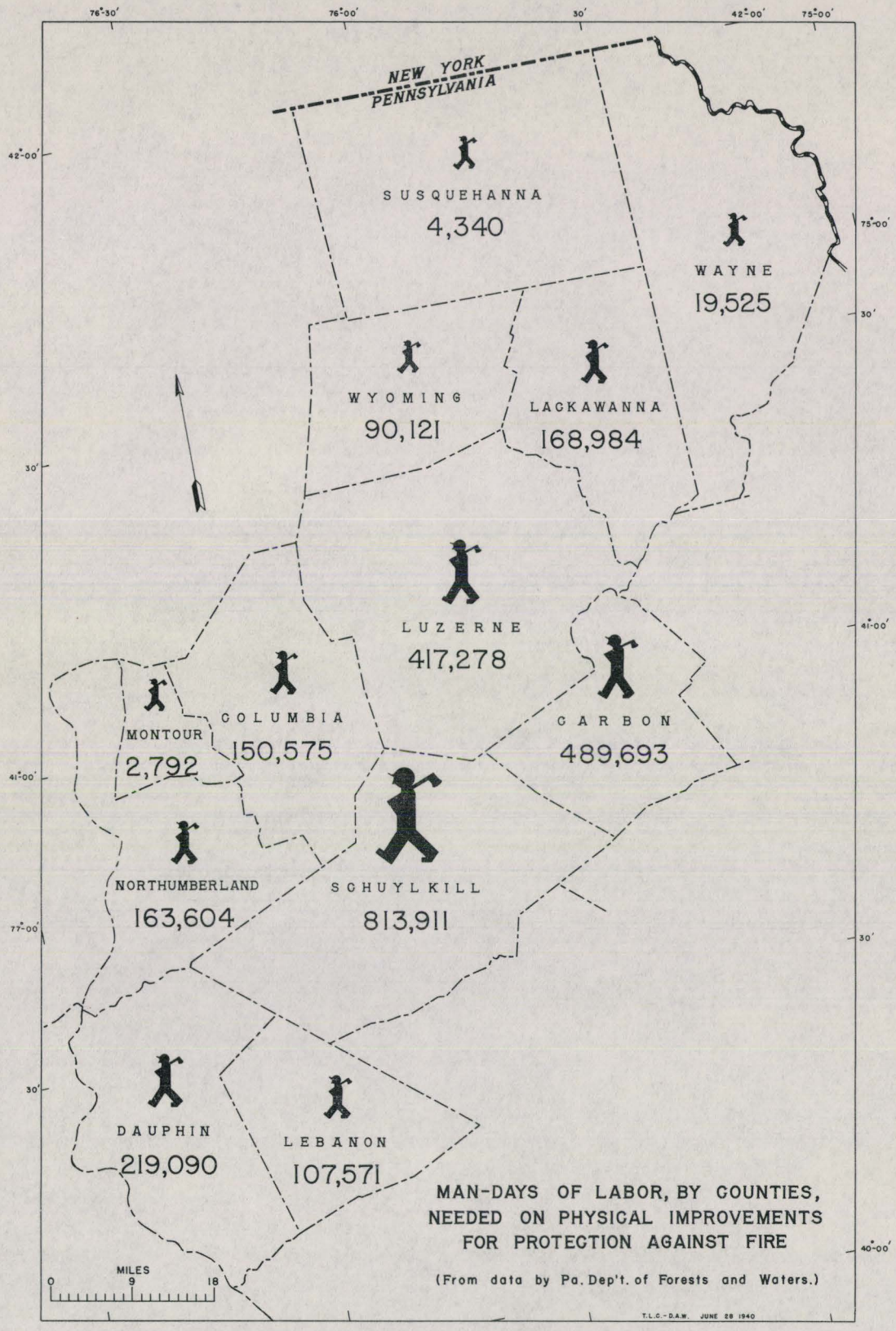

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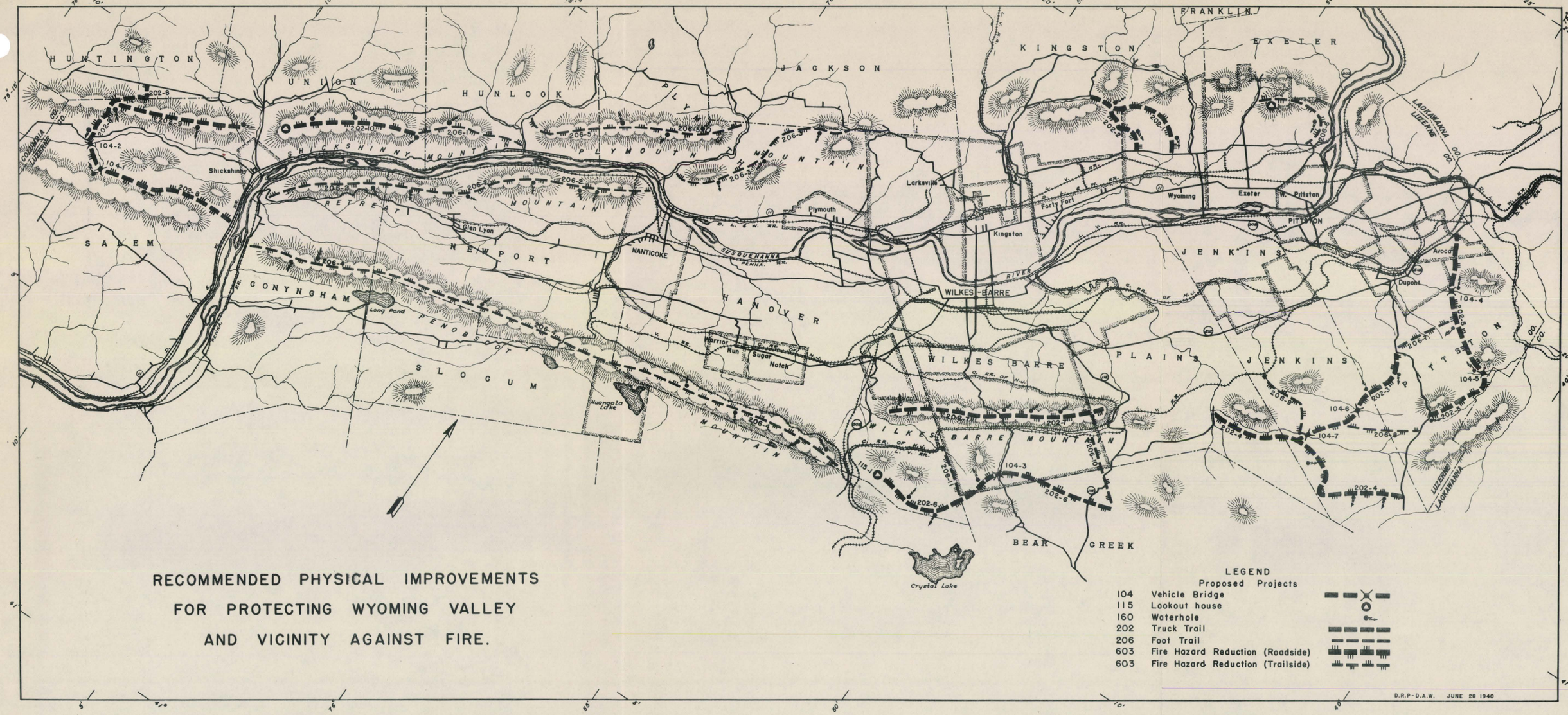

RECOMMENDED PHYSICAL IMPROVEMENTS FOR PROTECTING WYOMING VALLEY AND VICINITY AGAINST FIRE.

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